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ATTORNEY DOCKET NO. SD-6999.1/S97654
SERIAL NO. 10/601,370
PATENT

REMARKS

Claims 1-29 are pending in the application. Reconsideration is respectfully requested.

Claims 1, 3-14, and 16-29 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Number 5,768,156 to Tautges ("Tautges"). The present application and Tautges are both under obligation of assignment to a common assignee.

Tautges teaches a method of creating meshes where none exist. The present invention works on an existing mesh. Therefore, the Examiner, by citing Tautges (Col. 13, lines 10-28, Col. 14, lines 20-65, Col. 15, line 60 to Col. 16, line 8), is comparing the generation of sheets from nothing to generating the data structures from existing meshes.

Further, the Examiner cites Tautges (Col. 24, lines 26-61 and Cols. 25-30) as "determining nodes for merging together within the sheet." Applicants respectfully submit that what this reference is really describing is a union operation of lists of nodes along a sheet boundary. That is, list A contains three (3) nodes and list B contains two (2) nodes. After the Tautges operation, a new list C contains five (5) nodes resulting from combining/"merging" lists A and B; a straightforward additive operation ($3 + 2 = 5$). In the merge operation of the present invention, list A contains three (3) nodes and list B contains an identical number of nodes. After the merge operation, a new list C contains the same number of nodes in only one of the lists. That is, one of the lists is "merged" into the other and the nodes are eliminated; not an additive operation.

In addition, the Examiner cites Tautges (Cols. 35 and 36) as "removing or extracting the sheet of hexahedrons from the volume mesh." Applicants respectfully submit that these columns actually reference a movement mechanism from moving a

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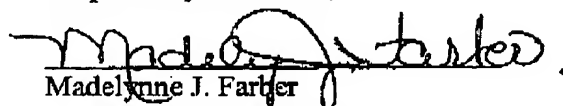
non-hexahedral (or degenerate) element around a mesh by a series of degenerative operations on surrounding hexes (i.e. the method described does not remove a hexahedron, but degenerates it to a non-hexahedral form and elevating the previously degenerate neighbor to a non-degenerate hexahedral state). The present invention collapses entire layers of hexahedral elements simultaneously without topologically degenerating neighboring hexahedra.

In view of the foregoing, Applicant respectfully submits that the present invention is patentably distinct from Tautges and that Claims 1-29 are in condition for allowance. Applicants respectfully request notice to that effect.

Further and favorable consideration is respectfully requested.

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Respectfully submitted,


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